

Work Order ID 111715

Monday, January 20, 2014 1:55:49 PM

111715

Page 1

Item ID: D3451-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Tube Handle Arm

Stop

NS2

Start Date: 1/20/2014 Start Qty: 24.00

24 ***28***
24

Cust Item ID:

Required Date: 1/24/2014 Req'd Qty: 24.00

Customer:

Reference:

Approvals:

Process Plan: MFDate: 14-1-20

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3451	Rev A								

100

0.00

100

FLOW WATER JET

Waterjet

FLOW CNC Waterjet

Memo

0.00

1-Cut as per Dwg D3451 Dwg Rev: A Prog Rev: A 2-
Deburr if necessary28 0 Ac 14-01-22

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Quality Control

Memo

0.00

28 0 Ac 14-01-22

120

QC8- Inspect parts - second check

0.00

120

QC

Quality Control

Memo

0.00

DAS
27
9.89
14/1/2228 0 Ac 14-01-22

DQA: _____ Date: _____

Date:

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Date:

Work Order update only



Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Design <input type="checkbox"/>											
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Handling/Pre <input type="checkbox"/>											
Material <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Offset/Setup <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Transport <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear			General								
<input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function								
			<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence								
			<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge								
			<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled								
			<input type="checkbox"/> Other								

Work Order ID 111715

Monday, January 20, 2014 1:55:49 PM

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Page 2

Item ID: D3451-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Tube Handle Arm

Stop

NS2

Start Date: 1/20/2014 Start Qty: 24.00

24

Cust Item ID:

Required Date: 1/24/2014 Req'd Qty: 24.00

24

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

130

Packaging

Packaging

Identify as per dwg & Stock Location: Mezz 2 0.00

28 8 14-01-22

140

140

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

PL 14-01-22
DR 14-01-22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS				
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Folio/Program	Outside Dimensions	Pressure/Forced
Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>
Centre Not Concentric <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>
Cracks <input type="checkbox"/>	Broken/Damage/Defect <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>
Crimp/Kink/Ripple/Wave <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>
Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>	
Crushing <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>
Heat Treat <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>		
Inspection Strip in Tube <input type="checkbox"/>	Drawing <input type="checkbox"/>	Off-set <input type="checkbox"/>		
Marks/Chatter <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>		
Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>		
Wave/Twist in Tube <input type="checkbox"/>	Fit/Function <input type="checkbox"/>			

Picklist Print

Monday, January 20, 2014 1:55:48 PM

Page 1

Work Order ID: 111715 **Start Date:** 1/20/2014 **Required Date:** 1/24/2014
Parent Item: D3451-1 **Start Qty:** 24.00 **Required Qty:** 24.00
Parent Item Name: Tube Handle Arm
Comments: IPP Rev:A 08-06-18 new issue DD verified by:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.125 6061-T6 .125 Sheet		Purchased	No			100	sf	201.7900	0.0712	?			Ac 14-01-22

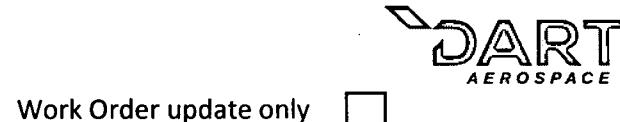
Location	Loc Qty	Loc Code
MAT021	201.79	
m127272	39.5	
<u>m127454</u>	130.29	
m127501	32	

127454 → 2.4

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

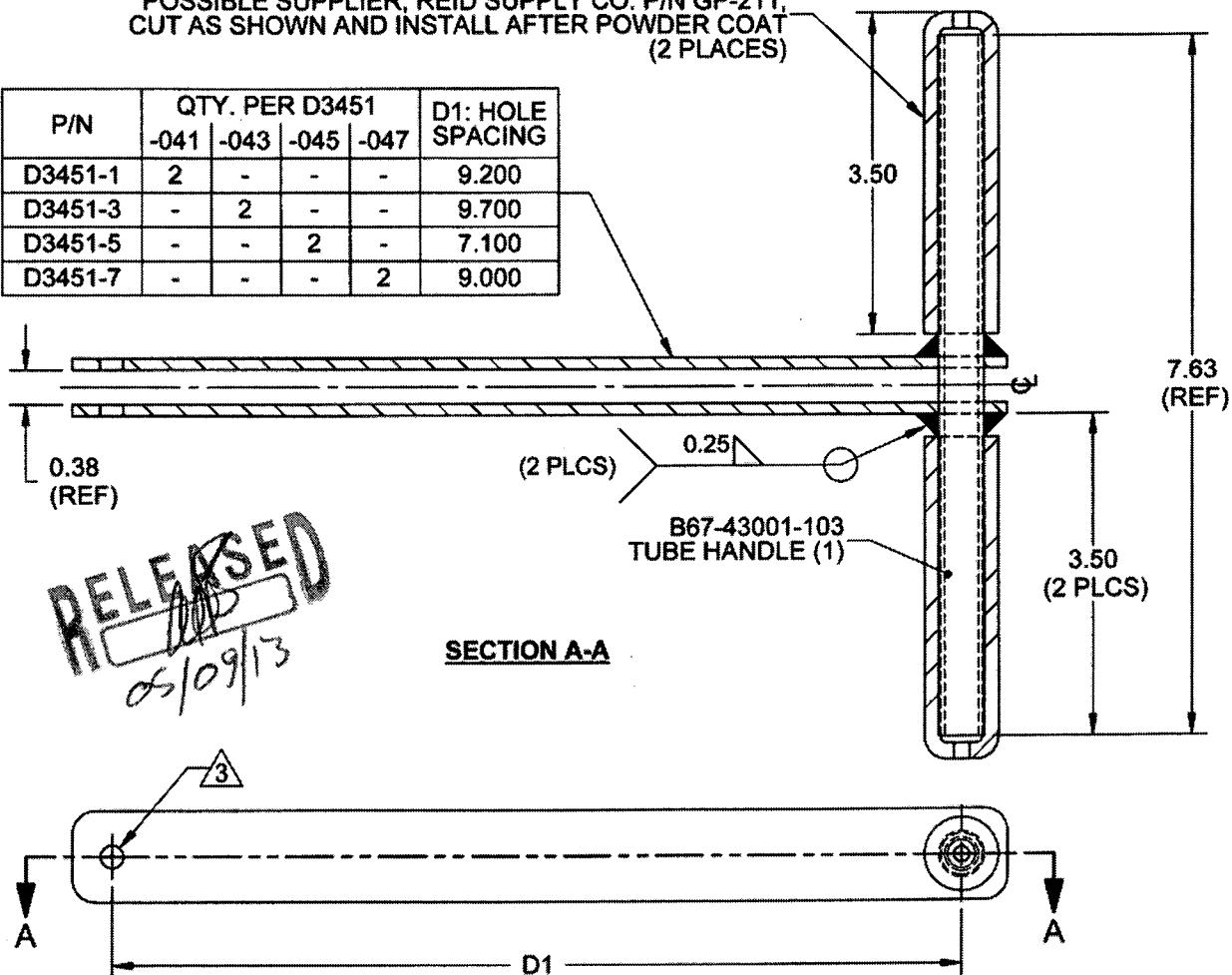
Landing Gear	General			
Bending	Bend	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>
Centre Not Concentric	BOM/Route	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>
Cracks	Broken/Damage/Defect	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>
Crimp/Kink/Ripple/Wave	Burrs	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>
Cuffs	Contamination	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>
Crushing	Countersink	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>
Heat Treat	Cut Too Short	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>
Inspection Strip in Tube	Drawing	<input type="checkbox"/>	Other	<input type="checkbox"/>
Marks/Chatter	Drill Holes	<input type="checkbox"/>		
Turning Sequence	Finish	<input type="checkbox"/>		
Wave/Twist in Tube	Fit/Function	<input type="checkbox"/>		

DART

DESIGNER	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. A
		D3451	SHEET 1 OF 2
DATE	05.08.25	TITLE	SCALE
		HANDLE & LOCK-DOWN ASS'Y	1:2
A	05.08.25	NEW ISSUE	

0.50" ID x 4.875" LONG BLACK VINYL HANDLE,
POSSIBLE SUPPLIER, REID SUPPLY CO. P/N GP-211,
CUT AS SHOWN AND INSTALL AFTER POWDER COAT
(2 PLACES)

P/N	QTY. PER D3451				D1: HOLE SPACING
	-041	-043	-045	-047	
D3451-1	2	-	-	-	9.200
D3451-3	-	2	-	-	9.700
D3451-5	-	-	2	-	7.100
D3451-7	-	-	-	2	9.000

**D3451-041/-043/-045/-047 HANDLE & LOCK-DOWN ASS'Y****D3451-041 SUPERSEDES PREMIER P/N B67-43001-41****D3451-045 SUPERSEDES PREMIER P/N B67-43001-39****D3451-047 SUPERSEDES PREMIER P/N B67-43001-55****NOTES:**

- 1) WELD PER DART QSI 004
- 2) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) MASK BEFORE PAINTING.
- 4) FINISH: POWDER COAT PAINT GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
- 5) PART IS SYMETRICAL ABOUT CENTER LINE.
- 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 7) ALL DIMENSIONS ARE IN INCHES
- 8) BREAK ALL SHARP EDGES 0.005 TO 0.010

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DQA:

Date:



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only

Work Order:

DISPOSITION

Rework Scrap Use-as-is Suspected Unapproved

AGAINST DEPARTMENT/PROCESS

Skid-tube Machining Thermoforming Large Fab Crosstube Small Fab Finishing Composite Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier Engineering Quality Other

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

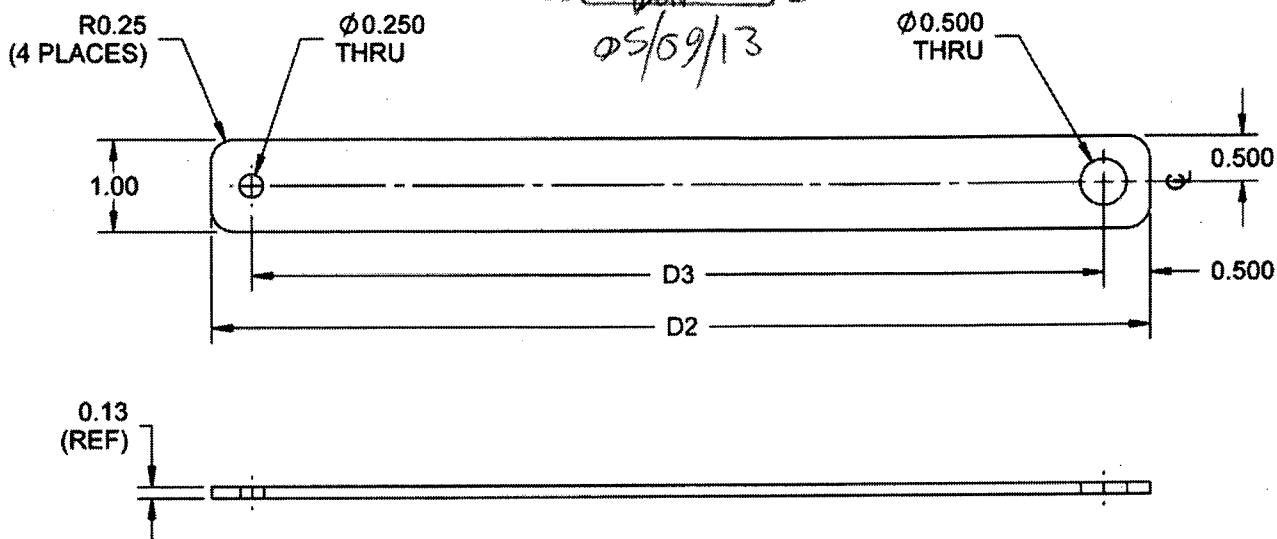
Landing Gear	General													
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>									
	Centre Not Concentric <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>									
	Cracks <input type="checkbox"/>	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>									
	Crimp/Kink/Ripple/Wave <input type="checkbox"/>	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>									
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>									
	Crushing <input type="checkbox"/>	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>										
	Heat Treat <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>									
	Inspection Strip in Tube <input type="checkbox"/>	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>											
	Marks/Chatter <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>											
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>											
	Wave/Twist in Tube <input type="checkbox"/>	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>											



DESIGN <i>b</i>	DRAWN BY <i>b</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED <i>F</i>	APPROVED <i>AB</i>	DRAWING NO. D3451	REV. A	SHEET 2 OF 2
DATE 05.08.25		TITLE HANDLE & LOCK-DOWN ASS'Y	SCALE 1:2	

RELEASED
AB

05/09/13



P/N	D2: CUT LENGTH	D3: HOLE SPACING
D3451-1	10.25	9.200
D3451-3	10.63	9.700
D3451-5	8.00	7.100
D3451-7	10.00	9.000

D3451-1/-3/-5/-7 TUBE HANDLE ARMS

D3451-1 SUPERSEDES PREMIER P/N B67-43001-303
D3451-5 SUPERSEDES PREMIER P/N B67-43001-301
D3451-7 SUPERSEDES PREMIER P/N B67-43001-101

#11175

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T62) BAR
PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
PER AMS-QQ-A-200/8 (OR AMS 4160)
(REF. DART SPEC. M6061T6B0.125)
- 2) PART IS SYMMETRICAL ABOUT CENTER LINE.
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.010

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DQA:

Date:



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only

Work Order: _____
 Part No. _____
 NCR No. _____

DISPOSITION

Rework
 Scrap
 Use-as-is
 Suspected Unapproved

AGAINST DEPARTMENT/PROCESS

Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear		General									
		<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Pressure/Forced					
		<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Set-up					
		<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Hardware	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Temperature/Cure					
		<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Burrs	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Weld					
		<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Moved	<input type="checkbox"/> Wrong Stock Pulled					
		<input type="checkbox"/> Crushing	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Positioned Wrong						
		<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Other					
		<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Drawing	<input type="checkbox"/> Misread							
		<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Off-set							
		<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration							
		<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Out of Sequence							

DART AEROSPACE LTD	Work Order:	B111715
Description: Tube Handle Arm	Part Number:	D3451-1
Inspection Dwg: D3451 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

DAS

Measured by:	<u>Ak</u>	Audited by:	<u>27</u> <u>p.m</u>	Preliminary Approval:	
Date:	<u>14.01.22</u>	Date:	<u>14/1/22</u>	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15

